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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Philemon L. BRUNER, *et al.*

Application Serial No. 09/497,284

Filed: February 2, 2000

For: **APPRATUS AND METHOD FOR  
REJECTING JAMMED COINS**

Art Unit: 3653

Examiner: SHAPIRO, Jeffrey A.

Attorney's Docket No:  
10356.0035.NPUS00

(BRUE:035)

Confirmation No : 7307

**RESPONSE TO NOTIFICATION OF NON-COMPLIANT APPEAL BRIEF DATED  
FEBRUARY 16, 2006**

**Mail Stop AF**

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

This is in Response to the Notification of Non-Compliant Appeal Brief dated 16 February 2005. The Notification provides for one month or thirty days from the mailing date (February 16) of the Notification, whichever is longer, for the filing of an amended brief or other appropriate correction. No fee is believed due in connection with this Response. However, if any fee is due in connection with this Response, the Director is authorized to charge any fees which may be required to Deposit Account No. 08-3038, referencing Attorney Docket No. 10356.0035.NPUS00.

Applicant hereby submits an Amended Appeal Brief, in triplicate, containing the corrections as specified in the Notification of Non-Compliant Appeal Brief.

Express Mail No.: **EV 854668775US**

Date Mailed: March 20, 2006

Should there be any questions, please contact the undersigned at the phone number listed.

Respectfully submitted,

Date: March 20, 2006

/Glenn W. Rhodes/

Glenn Rhodes (Reg. No. 31,790)

Constance F. Ramos (Reg. No. 47,883)

**HOWREY LLP**

2941 Fairview Park Drive, Box 7

Falls Church, VA 22042

Ph. (703) 663-3600

Fax (703) 336-6950

8303951



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PATENT

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**SECOND AMENDED APPEAL BRIEF**  
**PURSUANT TO 37 CFR 1.192**

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**I. Real Party in Interest**

Imonex Services, Inc., the assignee of record, is the real party in interest in the captioned application.

**II. Related Appeals and Interference**

There are no related appeals or interference known to Appellants that will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**III. Status of Claims**

The application contains pending Claims 1-23 and 27-34.

Claims 24-26 were withdrawn from consideration pursuant to a restriction requirement.

Claims 1-23 and 27-34 are on appeal.

Claims 1-7, 13-18 and 27-28 are subject to final rejection based on 35 U.S.C. § 102(b). Appellants note that although the Examiner did not specifically identify Claims 32 and 34 in the final rejection, these claims are listed in the Examiner's argument and Appellants believe the Examiner intended to include Claims 32 and 34 in the rejection under § 102(b) and will treat them in this brief as included in the rejection.

Claims 8-12, 19-23, 29-31 and 33 are subject to final rejection based on 35 U.S.C. § 103(a).

Claims 1-23 and 27-34 are subject to final rejection based on obviousness-type double patenting.



**IV. Status of Amendments**

No amendments were filed subsequent to the final rejection.

**V. Summary of Claimed Subject Matter**

**A. Introduction**

Sensors for detecting good and bad coins are known in the art. However, even in coin acceptor/rejectors that employ sensors, the problem of coins jammed in a coin race requires the use of a mechanical coin return button. A coin acceptor/rejector apparatus that eliminates the mechanical coin return provides advantages over the prior art, including allowing the positioning of a coin rejector in an area where a mechanical coin return is impractical. Moreover, a rejector that can serve the same function to monitor and detect good coins from bad coins, including jammed coins, simplifies the coin acceptor and rejector function, thereby increasing the utility and reliability of the coin acceptor and rejector.

**B. Independent Claims**

The pending independent claims are Claims 1, 13, 27, 32, 33 and 34. Independent Claims 27 and 34 and dependent Claims 28-30 contain means-plus-function limitations.

**C. Description**

In the claimed invention, the separator and rejector body is composed of at least two segments. These two segments are hinged together so that the separator and rejector body can be opened by pivoting the two segments apart about the hinge. These segments when put together in the closed position form a coin race between the two segments wherein the coin race has a first wall and a second wall. *See, e.g., Specification, p. 5:18-21 and Fig. 2 showing Rejector Body 9 and Pivoting Rejector Body Member 28.* The two segments are hinged together so that the two segments can be pivoted apart so as to open the rejector body, and thereby open at least a portion of the coin race formed between the two halves of the rejector body. Once the rejector body is pivoted into its open position, a coin within the coin race can fall from the rejector and acceptor body. *See, e.g., Specification, p. 8:6-10.* To make the rejection of false or jammed coins fully automatic, an actuator (*e.g., Fig. 2, Actuator 19*) is adapted to open and close the rejector body, and thereby the coin race itself, upon the detection of coins in the race by using one or more

sensors (*see, e.g., Specification, p. 5:6-8, and Fig. 2 IR Emitter 15 and Fig. 3 IR Receiver 16*) in electrical communication via a processor (*see, e.g., Specification, p. 5:3-13*) with an actuator such that upon detection of a coin by the sensor, the actuator will pivot the race wall from the closed position to the open position, thus permitting the coins to fall from the separator and rejector body and into a coin return. *See, e.g., Specification, p. 7:27-30.*

One or more sensors may be located in a downstream portion of the rejector body. *See, e.g., Specification, p. 3:13-14 and Second Sensor Area 17 as shown in Fig. 2.* A magnet may be mounted adjacent to the coin race in the upstream portion of the rejector body and adapted to swing away upon pivoting from the closed position to the open position. *See, e.g., Specification, p. 5:21-27 and Magnet 13, Magnet Arm 21 and Magnet Arm Hinge 23 in Fig. 3.*

#### **D. “Means For” Limitations**

A means for sensing located in the upstream portion of the rejector body (Claim 27) and in the downstream portion of the rejector body are described at, *e.g., Specification, p. 5:1 to p. 7:1, p. 11:6-20 and Upstream IR Emitter 15, IR Receiver 16 and Second Sensor Area 17 in Figs. 2 & 3, and IR Emitters 41 & 42, IR Receivers 43 and Light Coin Stop Springs 45 & 46 in Fig. 4.* A means for pivoting from a closed position to an open position (Claim 34) at least one of the hinged segments in pivotal connection with a least a portion of one of said walls is described at, *e.g., Specification, p. 7:27 to p. 9:9 and Fig. 2 Actuator 19, Actuator Connection Point 29, First Rejector Body Member 25, Second Rejector Body Member 27 and Fig. 3 Connection Point Member 31.*

Means for stopping a coin of less than a sufficient or predetermined weight (Claims 29 & 30) is shown by Light Coin Stop Springs 45 & 46 (**Fig. 4**) and may be employed to trigger the actuator to open the rejector body. *See, e.g., Specification, p. 11:10-20 and Fig. 4.*

Means for detecting objects in the coin race using sensors in the upstream and downstream portions of the acceptor and rejector body (Claim 34) are generally described in the Specification, *e.g., at p. 5:28-30 to p. 6:1-2*, and illustrated by IR Emitter 15 and

Second Sensor Area **17 (Fig. 2)**; IR Emitter **16 (Fig. 3)**; and Second Sensor Area **27**, Light Coin Stop Springs **45 & 46**, IR Emitters **41 & 42**, and IR Receivers **43 (Fig. 4)**.

As described in the specification, a processor connects the sensors to the actuator. A means for signaling a portion of the race wall to move from a closed position to an open position (Claim 34) is described and illustrated in the specification at, e.g., *p. 8:11-12*. Controller electronics consist of a microprocessor, power supply and associated electronics. *See, e.g., Specification, p. 9:10-16 and Processor 33 and Programming DIP Switches 35 (Fig. 3)*.

**VI. Grounds of Rejection to be Reviewed on Appeal**

- (a) Whether Claims 1-7, 13-18, 27-28, 32 and 34 are unpatentable under 35 U.S.C. § 102(b) as anticipated by *Chung* (U.S. Patent 5,788,047).
- (b) Whether Claims 8-11 and 19-22 are unpatentable under 35 U.S.C. § 103(a) as unpatentable over *Chung* in view of *Neathway et al* (U.S. Patent 6,227,343 B1).
- (c) Whether Claims 12, 23, 29 and 30 are unpatentable under 35 U.S.C. § 103(a) as being unpatentable over *Chung* in view of *Mercurio* (U.S. Patent 5,007,519).
- (d) Whether Claims 31 and 33 are unpatentable under 35 U.S.C. § 103(a) as being unpatentable over *Chung* in view of *Fougere* (U.S. Patent 3,792,766).
- (e) Whether Claims 1-23 and 27-34 are unpatentable under the judicially created doctrine of obviousness-type double patenting over Claims 1-22 of *Bruner* (U.S. Patent 5,988,349) in view of *Chung*.
- (f) Whether Claims 1-23 and 27-34 are unpatentable under the judicially created doctrine of obviousness-type double patenting over Claims 1-25 of *Bruner* (U.S. Patent 6,155,399) in view of *Chung*.
- (g) Whether Claims 1-23 and 27-34 are unpatentable under the judicially created doctrine of obviousness-type double patenting over Claim 1 of *Bruner* (U.S. Patent 5,647,470) in view of *Chung*.
- (h) Whether Claims 1-23 and 27-34 are provisionally unpatentable under the judicially created doctrine of obviousness-type double patenting over the claims of *Bruner* Application No. 09,339,011 in view of *Chung*.

## VII. Argument

### A. Anticipation

#### 1. Anticipation by Chung (U.S. Patent 5,788,047) Under 35 U.S.C. § 102(b)

##### a. Claims 1-7, 13-18, 27-28, 32 and 34.

*Chung* does not address the problem of jammed coins as described in the presently claimed invention. Anticipation requires that the claimed invention to be known in the prior art “in the detail of the claim” such that each element and limitation contained in the claim is present in a single prior art reference “arranged as in the claim.” *Karsten Mfg. Corp. v. Cleveleand Golf Co.*, 242 F.3d 1376, 1383, 58 U.S.P.Q.2d 1286 (Fed. Cir. 2001). The Chung reference fails to meet this requirement.

The device disclosed by *Chung* focuses on the deficiency of prior art “stopper boards” that act as a “gate” inserted through the race wall and across the path of the coin race. The stopper board is connected to a magnetic valve switch 91 and a magnetic valve arm 911. The board is retracted by actuation of the magnetic valve switch, thereby allowing a good coin to pass. Bad coins are blocked by the stopper board (*Chung*, Figs. 2 and 3). *Chung* notes that these stopper boards often fail to completely retract, causing a true coin to be guided to the coin return passage to drop into the coin exit. *Chung*, Col. 1:10-35. *Chung* also notes that when coins enter into the coin receiving passage, the coin is stopped by an additional stopper board until a signal is received to open the board. *Chung* notes the problem of multiple coins being inserted into the coin receiving passage that can jam the coin receiving passage.

*Chung* discloses a device that consists of two portions: (1) a coin sorting device 100, and (2) a sequential coin receiving device 200. *Chung*, Col. 2:56-57. The present invention is directed to coin sorting.

With respect to the coin sorting device, *Chung* addresses the problem of stopper boards by disclosing “a coin collecting machine including a coin sorting mechanism *pivotally disposed in a coin way* for adjustably biasing a shifting member so as to change

exit of the coin way, whereby the true coin and false coin are accurately dropped out from different exits into a coin receiving passage and a coin returning passage respectively.” *Chung*, Col. 1:54-62. (*Emphasis added*). In the presently claimed invention, there is nothing “pivotally disposed in the coin way” as described in *Chung*. Rather, the presently claimed invention addresses a different issue in a different way, eliminating many of the moving parts disclosed by *Chung* and improving the efficiency of the coin sorting process.

More specifically, *Chung* describes a device having three “base boards” put together to form a coin way. The second base board is “resiliently pivotally disposed on the first base board 1...” The “third base board 3 [is] fixedly disposed on the first base board 1.” The three base boards together “define a coin way 10 therebetween.” As described in *Chung*, a coin that enters into the coin race 101 of coin way 10 slides along coin way 10 and through the oscillators 20. *Chung*, Col. 4:10-14. *Chung*’s oscillators are serially connected to form a high or low frequency oscillating circuit 20a. *Chung*, Col. 3:45-46. This serves as a coin detecting device for analyzing the thickness, material and diameter of a coin 5 passing through the coin way 10, which provides data to a central processing unit in order to ascertain whether the coin is a “true or false one.” *Chung*, Col. 3:47-50. If the coin is good, a signal is generated to trigger driving member 42, which rotates a pushing lever 421. *Chung*, Col. 4:15-16. The front edge 410 of shifting member 41 is driven to abut against the first lateral wall 10a of the coin way 10. *Chung*, Col. 4:16-18. The coin then slides outward along a first face 41a of the shifting member 41 and drops into a coin receiving passage 61 of the coin receiving device 200. *Chung*, Col. 4:18 – 22.

*Chung* describes the sequential coin receiving device 200 as disposed under the coin sorting device 100, referring to Figs. 9 and 10. *Chung*, Col. 4:36-38. Referring to Figs. 4, 10, 11 & 12, *Chung* describes the operation when multiple coins are inserted into the coin collecting machine, through the coin detecting device and into the coin receiving device. When coins enter the passage 61, and a signal has not been generated to the controlling magnet valve 82, a stopper arm 813 of the first end of the coin receiving

member **81** is driven by a valve stem **821** to extend and stay in the coin receiving passage **61** for stopping the coins from dropping down further. *Chung*, Col. 5:39-47. The controlling magnetic valve **82** is described as having a sliding valve stem **821** that disposed therein. A spring **822** is compressed between the valve stem and the main body of the magnetic valve **82**. If the magnetic valve **82** is not energized, the spring **822** pushes the valve stem **821** to drive the stopper arm **813** “of the first end of the coin receiving member **81** to extend into the coin receiving passage **61**. *Chung*, Col. 5:25-33. When a signal is transmitted by the coin receiving device **200** to energize the magnetic valve **82**, the valve stem **821** is “magnetically attracted and retracted to drive the abutting member **814** to extend into the coin receiving passage **61** and retain the secondary coin **5** therein.” *Chung*, Col. 5:33-38.

The Examiner’s anticipation rejection identifies Claims 1, 7, 13, 18, 27, 28, 32 and 34 as describing a coin separator and rejector body as disclosed in *Chung*. 16 November 2004 Office Action, pp. 2-3 (hereinafter “Office Action”). The Examiner identifies *Chung*’s based boards **1** and **2** as being hinged together in pivotal connection, said hinged segments defining one or more downwardly inclined coin races formed between said hinged segments. *Office Action*, p. 2. The Examiner’s anticipation argument further identifies the driving member **42** and controlling magnetic valve **82** as described in *Chung* as equivalent to the “actuator” of the present invention and being “in mechanical connection with said pivotal portion of said race wall.” *Office Action*, p. 3. This is incorrect.

In *Chung*, the driving member **42** and controlling magnetic valve **82** are *not* in mechanical connection with the pivotally connected base boards **1** and **2**. Rather, a “coin removing lever **14** [is] connected with the second base board **2** for operatively outward biasing the second base board **2** and enlarging the distance between the first and second base boards **1**, **2** so as to remove any deformed coin **5** jammed in the coin way **10**.” In operation, a user must depress the coin removing lever **14** to remove jammed coins from the race. *See, e.g., Chung*, Col. 6:15-43. Coin detection and processor programming plays no part in the biasing apart of base boards **1** and **2** in *Chung*. *Chung* fails to



disclose the limitations of Claims 1, 7, 13, 18, 27, 28, 32 and 34 as arranged in the Claims. Accordingly, *Chung* fails to anticipate these claims.

**b. Claims 2 & 28**

With respect to anticipation of Claims 2 and 28, the Examiner's Final Rejection identifies a second sensor of *Chung* 20 located in a downstream portion of the rejector body. *Office Action*, p. 3. The Office Action references *Chung*, **Fig. 5** showing three sensors (oscillators as described at *Chung*, Col. 3:43-45) located along the raceway at certain locations. The Office Action concludes that these locations can be construed as upstream and downstream portions. However, the disclosure of *Chung* as referenced in the Office Action fails to anticipate Claim 2 and 28 of the present invention. The central processing unit generates a signal for biasing the shifting member 41 so as to change the outgoing direction of the coin way 10. *Chung*, Col. 3:51-54. The shifting member 41 is not related to the "resiliently pivotally disposed" first and second base boards. *Chung*, Col. 2:66-67; Col. 3:1. Accordingly, *Chung* fails to anticipate Claims 2 and 28.

**c. Claims 3-6 & 14-17**

With respect to the final rejection of Claims 3-6 and 14-17 for anticipation, the Office Action again references *Chung*'s driving member 42 and controlling magnetic valve 82. The Office Action concludes that the claimed solenoid and/or electric motor serve the same function, using the same structure in substantially the same way as in the present invention. *Office Action*, pp. 3-4. This is incorrect. As described above, the driving member 42 and the controlling magnetic valve 82 are not mechanically connected to the pivotally connected base boards 1 and 2 as in *Chung*. On this basis alone, Claims 3-6 and 14-17 are not anticipated by *Chung*.

**B. Obviousness**

**1. The Combination of Chung and Neathway Fails to State a Prima Facie Case of Obviousness (Claims 8-11 & 19-22).**

The final rejection of Claims 8-11 and 19-22 is based on a combination of *Chung* and *Neathway et al.* (U.S. Patent 6,227,343 B1). The Office Action references the *Chung* apparatus, noting that *Chung* fails to disclose Hall effect sensors, photoelectric sensors, LED sensors and IR sensors, as described in Claim 8-11 and 19-22. *Office Action*, p. 4. Citing *Neathway*, Col. 1:58-64; Col. 2:3-9; and Col. 4:17-30, the Office Action concludes that it would have been obvious to one of ordinary skill in the art to employ “Hall effect, photoelectric, LED or IR sensors in the coin raceway of *Chung*.” *Office Action*, p 4.

The issue is whether the combination of references applied by the Office Action can be properly combined to make out a case of prima facie obviousness. *See, e.g., McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1351, 60 U.S.P.Q.2d 1001 (Fed. Cir. 2001). To combine references, there must exist some teaching, suggestion, reason or motivation to do so. *Id.*

Appellants submit that the final rejection fails to set forth a prima facie case of obviousness. Even assuming that the sensors of *Neathway* are employed in the apparatus of *Chung*, as described above in connection with the asserted anticipation argument, the combination of *Chung* and *Neathway* would fail to arrive at the claimed invention. In *Chung*, the driving member **42** and controlling magnetic valve **82** are not in mechanical connection with the pivotally connected base boards **1** and **2**. As noted above, base boards **1** and **2** are biased apart through actuation of a coin return lever **14**. Coin detection and processor programming plays no part in the biasing apart of base boards **1** and **2** in *Chung*. The disclosure of *Neathway* does not alter the basic configuration of *Chung* and fails to disclose or suggest a reason to combine *Chung* and *Neathway* in order to do so. Accordingly, the Office Action fails to set forth a prima facie case of obviousness of Claims 8-11 and 19-22.

**2. The Combination of Chung and Mercurio Fails to State a Prima Facie Case of Obviousness (Claims 12, 23, 29 & 30).**

The final rejection of Claims 12 and 23 and Claims 29-30 are based on the combination of *Chung* and *Mercurio* (U.S. Patent 5,007,519). Appellants submit that the Office Action fails to set forth a prima facie case of obviousness. The Office Action states that *Chung* fails to disclose a light coin spring detector as in Claims 12, 23, 29 and 30. *Office Action*, p. 5. The Office Action indicates that *Mercurio* discloses a light coin spring detector 70 located in a downstream portion of a rejector body, referencing *Mercurio*, Col. 3:48-68 and Col. 4:1-4. The Office Action concludes that it would have been obvious to one of ordinary skill in the art at the time of the invention to add a light coin spring detector in the downstream passageway of the *Chung* apparatus. *Office Action*, p. 5. The Office Action indicates that the suggestion or motivation to do so would be “to provide a further layer of security in insuring correctly weighted coins are allowed to pass through to the coin box,” referring to the last seven lines of *Mercurio*’s abstract. *Office Action*, p. 5.

The apparatus of *Chung* operates differently from the presently claimed invention as discussed above in connection with the anticipation rejection. Even assuming a combination of *Chung* and *Mercurio*, the resulting combination would fail to arrive at the presently claimed invention, and neither *Chung* nor *Mercurio* contain any suggestion or motivation that would lead one of ordinary skill in the art to change or alter the basic operation of *Chung*. Moreover, the mechanism of *Mercurio* is fundamentally different than the mechanism of the present invention. *Mercurio* incorporates an adjustable weighting means 86 that allows the coin to proceed in a generally horizontal direction to a rejection means. *See Mercurio*, Col. 4:1-8. Coins of proper weight will be deflected by the adjustable weighting means 87 and allow a properly weighted coin to drop downwardly between plates 30 and 31 into a coin collection box, where horizontal movement is arrested by a stop washer 54. *See Mercurio*, Col. 3:61-68; Col. 4:1-4. Unlike *Mercurio*, the present invention employs light coin stop springs to stop underweight coins, thereby triggering the rejector body to open, allowing the underweight

coin to fall from the rejector body. Accordingly, *Mercurio* would have failed to suggest to one of ordinary skill in the art to stop underweight coins in a coin race. Accordingly, *Mercurio* fails to contain any suggestion or motivation to modify *Chung* to arrive at the presently claimed invention. Therefore the combination of *Chung* and *Mercurio* fails to set forth a prima facie case of obviousness.

**3. The Combination of Chung and Fougere Fails to State a Prima Facie Case of Obviousness (Claims 31 and 33)**

The final rejection of Claims 31 and 32 are based on a combination of *Chung* and *Fougere* (U.S. Patent 3,792,766). The Office Action indicates that *Chung* fails to disclose a magnet mounted adjacent the coin race in the upstream portion of the separator and rejector body as claimed in Claims 31 and 32. The Office Action indicates that *Fougere* discloses a magnet, concluding that it would have been obvious to one of ordinary skill in the art at the time of the invention to add a movable magnet in the downstream passageway of the rejector body of *Chung*. *Office Action, p. 6*. The Office Action indicates that the motivation or suggestion for doing so would be to add a further layer of security “to insure that coins having ‘a magnetic permeability to density ratio in excess of a predetermined value’ are eliminated from the raceway,” citing the abstract of *Fougere*. *Office Action, p. 6*.

As discussed above, the device of *Chung* operates differently from the presently claimed invention. Although the use of a magnet to remove coins from a raceway is described in *Fougere*, there is no motivation or suggestion contained in either *Chung* or *Fougere* to modify the device of *Chung* in such a way as to arrive at the presently claimed invention. Accordingly, the Office Action fails to set forth a prima facie case of obviousness.

**C. Obviousness-Type Double Patenting**

**1. Obviousness-Type Double Patenting Over Bruner (U.S. Patent 5,988,349) Claims 1-22 of in View of Chung (Claims 1-23 and 27-34).**

The final rejection of Claims 1-23 and 27-34 is based on the judicially created doctrine of obviousness-type double patenting. The Office Action indicates that the claims are unpatentable over Claims 1-22 of U.S. Patent 5,988,349 in view of *Chung*. *Office Action*, p. 7. Appellants submit that the obviousness-type double patenting rejection is unwarranted.

The legal standard for an obviousness-type double patenting rejection is whether the claim in the application defines an invention that is merely an obvious variation of an invention claimed in the patent. MPEP 804IIB1 states that a double patenting rejection of the obvious-type is "analogous to [a failure to meet] the nonobviousness requirement of 35 U.S.C. § 103 except that the patent principally underlying the double patenting rejection is not considered prior art. *In re Braithwaite*, 379 F.2d 594, 154 USPQ 29 (CCPA 1967). Therefore, any analysis employed in an obvious-type double patenting rejection parallels the guidelines for analysis of a 35 U.S.C. § 103 obviousness determination. *In re Braat*, 937 F.2d 589, 19 USPQ2d 1289 (Fed. Cir. 1991); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985)

The Office Action indicates that "[a]lthough the conflicting claims are not identical, they are not patentably distinct from each other because they both describe a coin separator and rejector body having one or more sensors located unstream (sic, upstream) and downstream of said rejector body, the system controlled by a processor." *Office Action*, p 7. This is incorrect. The '349 patent fails to contain any disclosure or claims relating to the use of sensors or actuators for sensing and removing jammed coins. Nor does *Chung* disclose the use of sensors or actuators to removed jammed coins from a coin race as described in the presently claimed invention. The Office Action fails to provide any further substantiation for concluding that the claims of the presently claimed invention are merely obvious variations of the claims of the '349 patent. Accordingly, the obviousness-type double patenting rejection of Claims 1-23 and 27-34 over the Claims 1-

22 of U.S. Patent No. 5,988,349 should be reversed on the merits because the instant claims are not merely an obvious variation of the claims in the '349 Patent.

**2. Obviousness-Type Double Patenting Over Bruner (U.S. Patent 6,155,399) Claims 1-25 (Claims 1-23 and 27-34).**

The final rejection of Claims 1-23 and 27-34 is based on the judicially created doctrine of obviousness-type double patenting. The Office Action indicates that the claims are unpatentable over Claims 1-25 of U.S. Patent 6,155,399 in view of *Chung*. Office Action, p. 7. Appellants submit that the obviousness-type double patenting rejection is unwarranted.

The final rejection of Claims 1-23 and 27-34 is based on the judicially created doctrine of obviousness-type double patenting. The Office Action indicates that “[a]lthough the conflicting claims are not identical, they are not patentably distinct from each other because the both describe a coin separator and rejector body having one or more sensors located unstream (sic, upstream) and downstream of said rejector body, the system controlled by a processor.” *Office Action*, p. 7. This is incorrect. The '399 patent fails to contain any disclosure or claims relating to the use of sensors or actuators for sensing and removing jammed coins. Nor does *Chung* disclose the use of sensors or actuators to removed jammed coins from a coin race as described in the presently claimed invention. The Office Action fails to provide any further substantiation for concluding that the claims of the presently claimed invention are merely obvious variations of the claims of the '399 patent. Accordingly, the obviousness-type double patenting rejection of Claims 1-23 and 27-34 over the Claims 1-25 of U.S. Patent No. 6,155,399 should be reversed on the merits because the instant claims are not merely an obvious variation of the claims in the '399 Patent.

**3. Obviousness-Type Double Patenting Over Bruner (U.S. Patent 5,647,470) Claim 1 in View Chung (Claims 1-23 and 27-34).**

The final rejection of Claims 1-23 and 27-34 is based on the judicially created doctrine of obviousness-type double patenting. The Office Action indicates that the claims are unpatentable over Claim 1 of U.S. Patent 5,647,470 in view of *Chung*. *Office Action*, p. 8. Appellants submit that the obviousness-type double patenting rejection is unwarranted.

The Office Action indicates that “[a]lthough the conflicting claims are not identical, they are not patentably distinct from each other because the both describe a coin separator and rejector body having one or more sensors located unstream (sic, upstream) and downstream of said rejector body, the system controlled by a processor.” *Office Action*, p. 8. This is incorrect. The ‘470 patent fails to contain any disclosure or claim relating to the use of sensors or actuators for sensing and removing jammed coins. Nor does *Chung* disclose the use of sensors or actuators to removed jammed coins from a coin race as described in the presently claimed invention. The Office Action fails to provide any further substantiation for concluding that the claims of the presently claimed invention are merely obvious variations of Claim 1 of the ‘470 patent. Accordingly, the obviousness-type double patenting rejection of Claims 1-23 and 27-34 over Claims 1 of U.S. Patent No. 5,647,470 should be reversed on the merits because the instant claims are not merely an obvious variation of the claim in the ‘470 Patent.

**4. Provisional Obviousness-Type Double Patenting in View Co-Pending Application Serial No. 09/339,011 in View of Chung (Claims 1-23 and 27-34).**

The final rejection of Claims 1-23 and 27-34 is based on the judicially created doctrine of obviousness-type double patenting. The Office Action indicates that the claims are unpatentable over co-pending Application 09/339,011 in view of *Chung*. Application Serial no. 09/339,011 has been abandoned. Accordingly, this provisional rejection has been rendered moot.

**VIII. Conclusion**

For the reasons stated above, the Examiner's rejection of Claims 1-23 and 27-34 is erroneous. The Honorable Board is respectfully requested to reverse the Examiner's rejection of all claims on appeal and remand the application to the Examiner for allowance.

Respectfully submitted

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/Glenn W. Rhodes/  
Glenn W. Rhodes (Reg. No. 31,790)  
Constance F. Ramos (Reg. No. 47,883)  
**Howrey LLP**  
**2941 Fairview Park Drive**  
**Suites 200 & 300**  
**Falls Church, VA 22042**  
**Phone: 703.663.3600**  
**Fax: 703.336.6950**



## APPENDIX A

### CLAIMS

1. A coin separator and rejector apparatus, comprising:
  - (a) a coin separator and rejector body having two or more segments hinged together in pivotal connection, said pivotally connected segments adapted to pivot around said hinge from a closed position to an open position, said hinged segments defining one or more downwardly inclined coin races formed between said hinged segments, said rejector body having an upstream portion and a downstream portion, and said coin races further comprising a first wall and a second wall, at least a portion of one of said walls in pivotal connection with a least one of said hinged segments of said coin separator and rejector body;
  - (b) one or more sensors located in said upstream portion of said rejector body;
  - (c) an actuator in mechanical connection said pivotal portion of said race wall; and
  - (d) a programmed processor in electrical communication with said one or more sensors and with said actuator whereby, in accordance with the programming of said processor, said actuator will pivot said pivotal portion of said race wall from said closed position to said open position upon detection of a coin by said one or more sensors.
2. The apparatus of Claim 1 further comprising a second sensor located in said downstream portion of said rejector body.
3. The apparatus of Claim 1 wherein said actuator is an electric motor.
4. The apparatus of Claim 1 wherein said actuator is a solenoid.
5. The apparatus of Claim 4 wherein said solenoid is a latching solenoid.
6. The apparatus of Claim 4 wherein said solenoid is a wound cap solenoid.
7. The apparatus of Claim 1 wherein at least one of said sensors is an induction coil.
8. The apparatus of Claim 1 wherein at least one of said sensors is a Hall effect sensor.

9. The apparatus of Claim 1 wherein at least one of said sensors is a photoelectric sensor.
10. The apparatus of Claim 9 wherein at least one of said sensors is an LED sensor.
11. The apparatus of Claim 9 wherein at least one of said sensors is an IR sensor.
12. The apparatus of Claim 1 further comprising a light coin spring detector positioned in the downstream portion of said rejector body.
13. A coin separator and rejector apparatus, comprising:
  - (a) a coin separator and rejector body having two or more segments hinged together in pivotal connection, said hinged segments adapted to pivot around said hinge from a closed position to an open position, said hinged segments defining one or more downwardly inclined coin races formed between said hinged segments, said rejector body having an upstream portion and a downstream portion, said coin races further comprising a first wall and a second wall, at least a portion of one of said walls in pivotal connection with at least one of said hinged segments of said coin separator and rejector body;
  - (b) one or more sensors located in said upstream portion of said rejector body;
  - (c) one or more sensors located in said downstream portion of said rejector body.
  - (d) an actuator in mechanical connection with said pivotal portion of said race wall; and
  - (e) a programmed processor in electrical communication with said sensors and with said actuator whereby, in accordance with the programming of said processor, said actuator will pivot said pivotal portion of said race wall from said closed position to said open position upon detection of a coin by said sensors.
14. The apparatus of Claim 13 wherein said actuator is an electric motor.
15. The apparatus of Claim 13 wherein said actuator is a solenoid.
16. The apparatus of Claim 15 wherein said solenoid is a latching solenoid.

17. The apparatus of Claim 15 wherein said solenoid is a wound cap solenoid.
18. The apparatus of Claim 13 wherein at least one of said sensors is an induction coil.
19. The apparatus of Claim 13 wherein at least one of said sensors is a Hall effect sensor.
20. The apparatus of Claim 13 wherein at least one of said sensors is a photoelectric sensor.
21. The apparatus of Claim 20 wherein at least one of said sensors is an LED sensor.
22. The apparatus of Claim 20 wherein at least one of said sensors is an IR sensor.
23. The apparatus of Claim 13 further comprising a light coin spring detector positioned between said one or more sensors located in said upstream portion of said rejector body and said one or more sensors located in said downstream portion of said rejector body.
24. A method of rejecting jammed coins from a coin separator and rejector, comprising
  - (a) programming a processor with a pre-selected minimum transit time and a pre-selected maximum transit time for a coin to transit a coin sensor located in a coin path in a coin separator and rejector;
  - (b) sensing the transit time of a coin transiting a coin sensor located in a coin path of a coin separator and rejector;
  - (c) sending a signal from said sensor to said processor;
  - (d) calculating the transit time of said coin transiting said coin sensor;
  - (e) comparing the transit time to said pre-selected minimum and maximum transit times; and
  - (f) sending a signal from said processor to a coin rejection actuator if said coin transit time fails to fall within said pre-selected transit times.
25. A method of rejecting jammed coins from a coin separator and rejector, comprising
  - (a) establishing an electronic signature for a coin with a sensor;

- (b) storing said electronic signature in a processor;
  - (c) sensing a coin with a sensor located in a coin path in a coin separator and rejector;
  - (d) sending a signal from said sensor to said processor;
  - (e) comparing said signal from said sensor with said electronic signature stored in said processor; and
  - (f) sending a signal from said processor to a coin rejection actuator if said signal fails to match said electronic signature.
26. A method of rejecting jammed coins from a coin separator and rejector, comprising:
- (a) detecting a coin in an upstream portion of a coin separator and rejector with a first sensor and sending a signal to a processor;
  - (b) waiting a predetermined time period for the detection of a signal by said processor from a second sensor positioned in a downstream portion of said coin separator and rejector; and
  - (c) sending a signal from said processor to a coin rejection actuator in the absence of a signal from said second sensor after said predetermined time period.
27. An apparatus for accepting and rejecting coins, comprising:
- (a) a coin separator and rejector body having an upstream portion and a downstream portion, said coin separator and rejector body formed from two or more segments hinged together, said hinged together segments adapted to pivot around said hinge from a closed position to an open position, said hinged together segments forming one or more downwardly inclined coin races between said hinged segments, said coin races further comprising a first wall and a second wall, at least a portion of one of said walls in pivotal connection with said hinged segment of said coin acceptor and rejector body;

- (b) means for sensing located in said upstream portion of said coin separator and rejector body;
  - (c) means for pivoting from a closed position to an open position at least one of said hinged segments in pivotal connection with at least a portion of one of said walls; and
  - (d) a processor in electrical communication with said sensing means and said pivoting means whereby, in accordance with the programming of said processor, said pivoting means will pivot said pivotal portion of said race wall from said closed position to said open position upon detection of a coin by said sensing means.
28. The apparatus of Claim 27 further comprising means for sensing located in said downstream portion of said coin separator and rejector body.
29. The apparatus of Claim 27 further comprising means for stopping a coin of insufficient weight in said coin race, said means located downstream of said sensing means.
30. The apparatus of Claim 27 further comprising means for stopping a coin of less than a predetermined weight, said means located between said sensing means located in said upstream portion of said coin separator and rejector body and said downstream portion of said coin separator and rejector body.
31. The apparatus of Claim 27 further comprising a magnet mounted adjacent said coin race in the upstream portion of said coin separator and rejector body.
32. A coin acceptor and rejector apparatus, comprising:
- (a) A coin acceptor and rejector body comprising two or more segments hinged together, said hinged together segments adapted to pivot around said hinge from a closed position to an open position, said hinged together segments further comprising one or more downwardly inclined coin races formed therein, said downwardly inclined coin races further comprising a first wall and a second wall wherein at least a portion of one of said race walls is in pivotal connection with said acceptor and rejector body, said pivotal connection having an open position and a closed position wherein

in said open position an object contained in said coin race will be released from said acceptor and rejector body; said acceptor and rejector body further comprising an upstream portion and a downstream portion;

- (b) A first sensor located in said upstream portion of said acceptor and rejector body, said first sensor adapted for detecting an object in said coin race in said upstream portion of said acceptor and rejector body;
  - (c) A second sensor located in said downstream portion of said acceptor and rejector body, said second sensor adapted for detecting an object in said coin race in said downstream portion of said acceptor and rejector body;
  - (d) An actuator in mechanical connection with said pivotal portion of said race wall for pivoting said pivotal connection from said closed position to said open position;
  - (e) A processor in electrical communication with said first sensor, said second sensor and said actuator, said processor programmed to receive a signal from said second sensor within a predetermined time period upon detection of an object by said first sensor in said upstream portion of said acceptor and rejector body, said processor further programmed to send a signal to said actuator to pivot said pivotal connection from said closed position to said open position if said predetermined time period is exceeded.
33. A coin acceptor and rejector apparatus, comprising:
- (a) A coin acceptor and rejector body comprising two or more segments hinged together, said hinged together segments adapted to pivot around said hinge from a closed position to an open position, said hinged together segments further comprising one or more downwardly inclined coin races formed therein, one or more downwardly inclined coin races formed within said acceptor and rejector body, said downwardly inclined coin races further comprising a first wall and a second wall wherein at least a portion of one of said race walls is in pivotal connection with said acceptor

and rejector body, said pivotal connection having an open position and a closed position wherein in said open position an object contained in said coin race will be released from said acceptor and rejector body; said acceptor and rejector body further comprising an upstream portion and a downstream portion;

- (b) A magnet mounted adjacent said coin race located in said upstream portion of the said acceptor and rejector body, said magnet adapted to swing away upon pivoting said pivotal connection from said closed position to said open position;
- (c) A first sensor located in said upstream portion of said acceptor and rejector body, said first sensor adapted for detecting an object in said coin race in said upstream portion of said acceptor and rejector body;
- (d) A second sensor located in said downstream portion of said acceptor and rejector body, said second sensor adapted for detecting an object in said coin race in said downstream portion of said acceptor and rejector body;
- (e) An actuator in mechanical connection with said pivotal portion of said race wall for pivoting said pivotal connection from said closed position to said open position;
- (f) A processor in electrical communication with said first sensor, said second sensor and said actuator, said processor programmed to receive a signal from said second sensor within a predetermined time period upon detection of an object by said first sensor in said upstream portion of said acceptor and rejector body, said processor further programmed to send a signal to said actuator to pivot said pivotal connection from said closed position to said open position if said predetermined time period is exceeded.

34. A coin acceptor and rejector apparatus, comprising:

- (a) a coin acceptor and rejector body comprising two or more segments hinged together, said hinged together segments adapted to pivot around

said hinge from a closed position to an open position, said hinged together segments further comprising one or more downwardly inclined coin races formed therein, one or more downwardly inclined coin races formed within said acceptor and rejector body, said downwardly inclined coin races further comprising a first wall and a second wall wherein at least a portion of one of said race walls is in pivotal connection with said acceptor and rejector body, said pivotal connection having an open position and a closed position wherein in said open position an object contained in said coin race will be released from said acceptor and rejector body; said acceptor and rejector body further comprising an upstream portion and a downstream portion;

- (b) Means for detecting an object in said coin race by a first sensor located in said upstream portion of said acceptor and rejector body;
- (c) Means for detecting an object in said coin race by a second sensor located in said downstream portion of said acceptor and rejector body;
- (d) Means for pivoting a portion of said race wall from said closed position to said open position;
- (e) Means for signaling said pivotal portion of said race wall to move from said closed position to said open position if a predetermined time period is exceeded in detecting an object in said coin race by said first sensor and detecting an object in said coin race by said second sensor.



**APPENDIX B**

**EVIDENCE**

-- NONE --

**APPENDIX C**

**RELATED PROCEEDINGS**

-- NONE --